

**Proposed Modifications to the
Wisconsin Commercial Building Code**

Number	Title	Title/Summary	Modifications
1	Storm shelters	Requires storm shelters in Group E occupancies.	SPS 362.0423 is created to read: <u>SPS 362.0423 Storm shelters.</u> The requirements in IBC sections 423.3 and 423.4 are not included as part of chs. SPS 361 to 366.
2	Assembly occupancy on roofs.	Requires sprinklers for assembly occupancy on roofs.	SPS 362.0903 (16) is created to read: <u>SPS 362.0903 (16) ASSEMBLY OCCUPANCIES ON ROOFS.</u> The requirements in IBC section 903.2.1.6 are not included as part of chs. SPS 361 to 366.
3	Limited Area Sprinkler Systems	Revisions reduced the number of sprinklers from 20 to 6 that can be used in a limited area sprinkler system in any fire area.	
4	Domestic Cooking Systems	Adds fire protection system requirements for domestic cooking systems in group I-2 condition 1 occupancies.	SPS 362.0904 (3) is created to read: <u>SPS 362.0904 (3)</u> The requirements in IBC sections 904.13, 904.13.1, and 904.13.2 are not included as part of chs. SPS 361 to 366.
5	Fire Alarm and Detection in Group A Occupancies	Adds fire alarm and detection requirements in buildings housing two or more Group A occupancies.	SPS 362.0907 (5) is created to read: <u>SPS 362.0907 (5) FIRE ALARM AND DETECTION IN GROUP A OCCUPANCIES.</u> (a) Substitute the following for the requirements, but not the exceptions, in IBC section 907.2.1: A manual fire alarm system that activates the occupant notification system in accordance with IBC section 907.5 shall be installed in Group A occupancies with an occupant load due to the assembly occupancy is 300 or more. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy. (b) The requirements in IBC section 907.2.1.2 are not included as part of chs. SPS 361 to 366. (Removes requirement for emergency voice/alarm communications in Group A occupancies.)

6	Fire Alarm and Detection in Certain Group E Occupancies.	IBC section 907.2.3 adds a requirement for EVAC systems and modifies threshold for alarm systems in Group E occupancies.	<p>SPS 362.0906 (6) is created to read:</p> <p><u>SPS 362.0907 (6) FIRE ALARM AND DETECTION IN GROUP E OCCUPANCIES. The requirements in IBC section 907.2.3 exception 2. and exception 4.2 are not included as part of chs. SPS 361 to 366.</u></p>
7	Floor Level Exit Signs	IBC section 1013.2 adds a requirement for low level exit signs in Group R-1 occupancies.	<p>SPS 362.1013 is created to read:</p> <p><u>SPS 362.1013 Floor-level exit signs.</u> The requirements in IBC section 1013.2 are not included as part of chs. SPS 361 to 366.</p>
8	Bleachers and Grandstands	IBC section 1029.1.1.1 adds requirements to spaces under bleachers or grandstands for uses other than ticket sales.	<p>SPS 362.1029 is created to read:</p> <p><u>SPS 362.1029</u> The requirements in IBC section 1029.1.1.1 are not included as part of chs. SPS 361 to 366.</p>
9	Upholstered Furniture	IBC section 903.2.9 condition 5 requires sprinklers for Group S-1 used for upholstered furniture or mattresses.	<p>SPS 362.0903 (12) is created to read:</p> <p><u>SPS 362.0903 (12) UPHOLSTERED FURNITURE.</u> The requirements in IBC section 903.2.9 condition 5 are not included as part of chs. SPS 361 to 366.</p> <p><i>This removes the 2015 sprinkler requirement for Group S-1 occupancies used for the storage upholstered furniture or mattresses in buildings that exceed 2,500 square feet. The council created a Wisconsinism related to this topic as follows:</i></p> <p><u>SPS 362.0903 (12) UPHOLSTERED FURNITURE. Substitute the following wording for the requirement and condition in IBC section 903.2.9 condition 5: A group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m²), except that this requirement does not apply if upholstered furniture or mattresses are stored in an unoccupied self-service storage building.</u></p>
10	Multistorey Type B Dwelling Units	IBC section 1107.7.2 Primary entry level in a multistorey Type B dwelling unit served by an elevator must have a living area, kitchen and toilet facility.	

11	General - Application	C401.2 clarifies three options for compliance. Option 3 requires an energy cost equal to or less than 85 percent of standard reference building.	<p>SPS 363.0401 (4) is created to read:</p> <p><u>SPS 363.0401 (4) COMPLIANCE REQUIREMENTS.</u> Substitute the following in IECC section C401.2 condition 3: The requirements of IECC sections C402.5, C403.2, C404, C405.2, C405.3, C405.4, C405.6 and C407.</p> <p><i>(This language would retain the clarification as to how to comply with the IECC, but removes the energy cost requirement.)</i></p>
12	Building Envelope Requirements	C402-2015 IECC focuses more on building envelope than previous version of the code. Higher R values.	
13	HVAC Equipment Performance	C403.2.3 and Tables 403.2.3 (1-9) 2015 modifies equipment performance requirements.	
14	Zone Isolation	C403.2.4.4 requires zones served by HVAC systems over 25,000 square feet or more to be subdivided into isolation areas.	<p>SPS 363.0403 (7) is created to read:</p> <p><u>SPS 363.0403 (7) ZONE ISOLATION.</u> The requirements in IECC section 403.2.4.4 are not included as part of chs. SPS 361 to 366.</p>
15	Demand Control Ventilation	C403.2.6.1 modifies the threshold for DCV from average occupant load of 40/1000 to 25/1000.	<p>SPS 363.0403 (8) is created to read:</p> <p><u>SPS 363.0403 (8) DEMAND CONTROLLED VENTILATION.</u> Substitute the following for the wording, but not the exceptions, in IECC section 503.2.6.1: Demand control ventilation (DCV) is required for spaces larger than 40 people per 1000 sq. ft. (93 m²) of floor area (as established in Table 403.3 of the International Mechanical Code) and served by systems with one or more of the following:</p> <ol style="list-style-type: none"> 1. <u>An air-side economizer.</u> 2. <u>Automatic modulating control of the outdoor air damper.</u> 3. <u>A design outdoor airflow greater than 3,000 cfm (1400L/s).</u>

16	Garage Ventilation Controls	IECC section C403.2.6.2 requires mandatory installation of automatic garage controls.	
17	Pipe Insulation	Modifies piping insulation requirements. Increases insulation by about 30 to 50%. Cooling reduced. More restrictive higher R value. New table.	<p>SPS 363.0403 (9) is created to read:</p> <p><u>SPS 363.0403 (9) PIPING INSULATION.</u> (a) <u>Substitute the following for the requirements, but not the exceptions, in IECC section C403.2.10: All piping serving as part of a heating or cooling system shall be thermally insulated in accordance with Table 363.0403.</u></p> <p>(b) <u>Substitute the following for exception 5. In IECC section C403.2.10: 5. Runout piping not exceeding 4 feet (1219 mm) in length and 1 inch (25mm) in diameter between the control valve and HVAC coil.</u></p> <p>(c) <u>IECC section C403.2.10 exception 6 is not included as part of chs. SPS 361 to 366.</u></p> <p>(d) <u>Substitute the following for IECC Table C403.2.1:</u></p> <p>Table 363.0403 is created to read: (See draft rule language.)</p>
18	Protection of Pipe Insulation	C403.2.10.1 establishes requirements for protecting pipe insulation.	<p>SPS 363.0403 (10) is created to read:</p> <p><u>SPS 363.0403 (10) PROTECTION OF PIPING INSULATION.</u> <u>The requirements in IECC section C403.2.10.1 are not included as part of chs. SPS 361 to 366.</u></p>
19	Walk-in Coolers and Freezers	C403.2.15 and 16 establishes requirements for walk-in coolers, freezers, refrigerated warehouse coolers and freezers. New standards for walk-ins.	<p>SPS 363.0403 (11) is created to read:</p> <p><u>SPS 363.0403 (11) WALK-IN COOLERS AND FREEZERS.</u> <u>The requirements in IECC sections C403.2.15 and C403.2.16 are not included as part of chs. SPS 361 to 366.</u></p>
20	Boiler Turndown	C403.4.2.5 establishes turndown ratio for boilers with design input over 1,000,000 BTU/hr.	<p>SPS 363.0403 (12) is created to read:</p> <p><u>SPS 363.0403 (12) BOILER TURNDOWN.</u> <u>The requirements in IECC section C403.2.5 are not included as part of chs. SPS 361 to 366.</u></p>

21	Economizer Heating System Impact	C403.3.2	SPS 363.0403 (13) is created to read: <u>SPS 363.0403 (13) ECONOMIZER HEATING SYSTEM IMPACT.</u> The requirements in IECC section C403.3.2 are not included as part of chs. SPS 361 to 366.
22	Lighting Equipment (mandatory)	Modifies from 50 to 75 percent of the line voltage fixtures required to have high efficiency bulbs.	SPS 363.5404 is created to read: <u>SPS 363.5404 Lighting equipment.</u> Substitute the following wording for the requirements, but not exception, in IECC section R404.1: Not less than 50 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.
23	Lighting Controls	C405 adds more stringent requirements for daylighting, lighting controls and allowed lighting power densities in new and existing buildings.	
24	Lighting Occupant Sensor Controls	C405.2.1 Requires occupancy sensors in classroom, conference rooms, etc. and all areas 300 sq. feet or less enclosed by floor to ceiling height partitions.	SPS 363.0405 (3) is created to read: <u>SPS 363.0405 (3) OCCUPANT SENSOR LIGHTING CONTROLS.</u> (a) Substitute the following for the requirements, but not the exceptions, in IECC section C405.2: Lighting systems shall be provided with controls as specified in Sections C405.2.2, C405.2.3 C405.2.4 and C405.2.5. (b) The requirements in IECC section C405.2.1 are not included as part of chs. SPS 361 to 366.
25	Additional Efficiency Package Options	C406.1 requires buildings to comply with at least one of several additional efficiency package options.	SPS 363.0406 is created to read: <u>SPS 363.0403 Requirements for additional efficiency package options.</u> The requirements in IECC section 363.0403 are not included as part of chs. SPS 361 to 366.

26	Performance Based Compliance	IECC section C407.3 modifies performance based compliance methodology but requiring buildings to achieve to achieve 15 percent greater energy efficiency since C401.2 requires building energy cost to be equal to or less than 85 percent of the standard reference design building.	
27	Lighting Operation and Maintenance Manuals	IECC section C408.2.5.2.6Lighting contractor required to provide operations and maintenance manuals for lighting and lighting controls.	
28	Occupant Sensor Controls	IECC section C408.3.1 requires functional testing of occupant sensor controls and time-switch controls.	
29	Table R402.1.2 Insulation and Fenestration Requirements	Table R402.1.2 Modifies the prescriptive insulation and fenestration requirements for continuous insulation at wood framed walls in Climate Zones 6 and 7. Increased R-values.	
30	Air Leakage Inspection and Testing	Requires inspection and testing and increases tightness requirements.	
31	Protecting Piping Insulation (Residential)	R403.4.1 establishes requirements for protecting pipe insulation in residential buildings	SPS 363.5403 (3) is created to read: <u>SPS 363.5403 (3) PROTECTION OF PIPING INSULATION IN RESIDENTIAL BUILDINGS.</u> The requirements in IECC section R403.4.1 are not included as part of chs. SPS 361 to 366.
32	Fenestration	C402.4, C402.4.1.1 and C402.4.1.2	SPS 363.0402 is created to read: <u>SPS 363.0402 Fenestration.</u> The requirements in IECC sections C402.4, C402.4.1.1 and C402.4.1.2 are not included as part of chs. 361 to 366.
33	Mechanical Ventilation R-2 Occupancies Three Stories or Less	Mechanical ventilation requirements for R-2 occupancies three stories or less in height have been completely revised.	

34	Nail, Manicure and Pedicure Stations	IMC Tables have revised footnotes with ventilation requirements for nail, manicure and pedicure stations.	<p>Replace footnote m. with the following:</p> <p><u>For nail salons, the required exhaust shall include ventilation tables or other systems that capture the contaminants and odors at their source and are capable of exhausting a minimum of 50 cfm per station.</u></p> <p><i>SPS 364 substitutes a table for table 403.3.1.1. and the footnote for nail salons are listed under m. in SPS 364 rather than h. as in the IMC.</i></p> <p>This is a new Wisconsinism:</p> <p><u><i>m. For all nail salons, each manicure and pedicure station shall be provided with a source capture system capable of exhausting not less than 50 cfm per station. Exhaust inlets shall be located in accordance with IMC section 502.20. Where one or more required source capture systems operate continuously during occupancy, the exhaust rate from such systems shall be permitted to be applied to the exhaust flow rate required under Table 364.0403 for the nail salon.</i></u></p>
35	Domestic Kitchen Exhaust Hoods	Scope of domestic kitchen hoods coverage has been expanded beyond dwelling units.	<p>SPS 364.0505 is created to read:</p> <p><u>SPS 364.0505 Domestic kitchen exhaust equipment.</u> <u>The requirements in IMC section 505.4 are not included as part of chs. SPS 361 to 366.</u></p>
36	Door Swing	IFBC section 502.7.1 has been added to address a condition where a door could impact or come too close to an appliance vent terminal.	<p>SPS 365.0502 is created to read:</p> <p><u>SPS 365.0502 Door swing.</u> <u>The requirements in IFGC section 502.7.1 are not included as part of chs. SPS 361 to 366.</u></p>
37	Multiple Hoods Utilizing a Single Exhaust Hood	Prohibits use of a single sensor mounted in common ductwork for commercial kitchen hoods having multiple hoods manifolded together.	<p>SPS 364.0507 (2) is repealed and recreated to read:</p> <p><u>SPS 364.0507 (2) MULTIPLE HOODS UTILIZING A SINGLE EXHAUST SYSTEM.</u> <u>The requirements in IMC section 507.1.1.1 are not included as part of chs. SPS 361 to 366.</u></p>
38	Fire Alarm System Alteration Level 3	IEBC section 904.2 Install a fire alarm system and detection system with any level 3 alteration.	